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This publication contains titles and abstracts of Japanese periodicals. Each periodical is abstracted as a whole and its issues summarized with a listing of volume and issue or report numbers and the dates of publication. Each periodical and each title and abstract has also been assigned an Index Number at the right in accordance with the Basic Intelligence Directive. Due to limitations of personnel and volume of material, it has been found necessary to require local agencies interested in any item covered by these abstracts to first send a representative to Sixth Floor, 1340 L Street, N. W., in order to preview the article prior to formal request for further translation. Formal requests should be made through the Office of Collection and Dissemination, CIG, 2430 E Street, N. W., Washington, D. C.

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TOKYO TEIKOKU DAIGAKU KOKU KENKYUJO HOKOKU  
"Reports of the Aeronautical Research Institute,  
Tokyo Imperial University"

2302.0800

Published as a series of research reports in sequence by report numbers at irregular intervals. Included are reports on aeronautics, metallurgy, dynamics and related subjects in English, German or Japanese prepared by members of the Institute. Reports No 186 to 325 inclusive, Dec 1939 to Feb 1945.

The following are titles and abstracts of all reports published between Feb 1941 and Feb 1945. Certain titles, originally rendered in English by the authors, have been modified to correspond with American technical terminology.

Feb 1941 - Vol XVI, No 204

"Numerical Calculation by JS Diagram of Power Variation with Altitude of a Naturally Aspirated Engine"  
Changes with altitude on the theoretical IMEP of a naturally aspirated engine, calculated from sea level to 15,000 meters by JS diagrams of air and combustion gases. 31 pp.

2302.0200

Mar 1941 - Vol XVI, No 205

"On the Subsonic Flow of a Compressible Fluid Past Symmetrical Joukowski Airfoil". 92 pp.

2302.0200

Apr 1941 - Vol XVI, No 206

"Research on Propeller Flutter, Part III"  
Vibration and sound of a revolving thin plate; acoustical model of propeller flutter. 33 pp.

2302.0608

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Apr 1941, Vol XVI, No 207

"Nature of a Satellite in the X-ray Pattern of Alpha-Crystals, and the Differentiation of a New-Phase Alpha-Prime by the Surface Recrystallization Method in Certain Ternary Alloys, Part I, The Iron-Nickel-Aluminum System." 36 pp. 4205.0225  
4205.0400  
4205.0300

May 1941 - Vol XVI, No 208

"Characteristics of an Airfoil with Discontinuities Along the Span with Special Reference to the Effect of Cutouts" 2302.0800  
Methods of calculating the lift distribution of an airfoil with discontinuities, characteristics of an airfoil with longitudinal slots, a divided airfoil and an airfoil with cutout, and characteristics of an airfoil with rectangular cutout. 56 pp.

May 1941 - Vol XVI, No 209

"An X-ray Study of the Mechanism of the Splitting Phenomenon of Alpha-Crystals in the Interiors of Some Ternary Alloys, Part I, The Iron-Nickel-Aluminum System." 33 pp. 4205.0225  
4205.0400  
4205.0300

May 1941 - Vol XVI, No 210

"Resistance welding of Light Alloys" 4205.0301  
Explanation of the electric resistance welding of light metals and results of experiments. 182 pp.

Aug 1941 - Vol XVI, No 211

"On the Theory of the Turbulent Boundary Layer on a Flat Plate" 8710  
The mean vortex theory on turbulent flow in which the turbulence is considered to be composed of very fine vortices which decay or grow. 9 pp.

Aug 1941 - Vol XVII, No 212

"The Coupling of the Propeller Blade Bending Vibration with the Crankshaft Twisting Vibration in a V-Type Engine." 43 pp. 2302.0608

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Sep 1941 - Vol XVII, No 213

"Theory of the Vibration of a Body under Forces of  
Different Periods" 8710

Theoretical interpretation of previous experiments  
concerning the forced vibration of varying  
frequencies, using operational calculus and  
Fresnal's integrals. 47 pp.

Sep 1941 - Vol XVII, No 214

"On the Resistance of an Airfoil in a High-Speed  
Stream with Special Reference to Shock Waves" 2302.0800  
19 pp.

Oct 1941 - Vol XVII, No 215

"The Boundary Layer of a Flat Plate in an  
Incompressible Fluid" 27 pp. 8710

Oct 1941 - Vol XVII, No 216

"On the Subsonic Flow of a Compressible Fluid Past a  
General Joukowski Profile" 79 pp. 8710

Oct 1941 - Vol XVII, No 217

"On the Phenomena of Ice Formation" 2302.0000  
Method of studying ice formation on aircraft in  
flight and results of experiments with a wind  
tunnel of the Goettingen type with special  
experimental chamber. 15 pp.

Nov 1941 - Vol XVII, No 218

"On the Reaction between a Pressurized Circular  
Cylindrical Shell and Its Frame" 8710  
Calculation of the deformation shearing forces,  
bending movements of a cylindrical shell with internal  
pressure equipped with an elastic circular frame, one  
edge of the flange being jointed to the shell. 9 pp.

Nov 1941 - Vol XVII, No 219

"On the Circular Plate under Uniform Pressure  
Constrained Arbitrarily at the Boundary" 8710  
Solution of the deformation of a circular plate  
under uniform pressure. 15 pp.

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Nov 1941 - Vol XVII, No 220

"On Cam Forms which Induce No Surging in Valve Springs" 8710  
Explanation of method of building up cam forms.  
10 pp.

Nov 1941 - Vol XVII, No 221

"Characteristics of the Cooling System, Part I" 2305.0200  
Analysis of the problem and comparison of  
theoretical calculations with experimental  
results. 11 pp.

Dec 1941 - Vol XVII, No 222

"Research on Low Temperature Annealing of Cold-Worked 4205.0500  
Metals and Alloys, Report No 1" 4205.0902  
Experimental research on the method of manufac-  
turing high-tensile copper cadmium wire. 32 pp.

Jan 1942 - Vol XVII, No 223

"Research on the Al-Zn-Mg Alloy 'SSD'" 23 pp. 4205.0300  
4205.0500

Apr 1942 - Vol XVII, No 224

"Temperature Rise of Brake Drum During Landing Run" 2302.0100  
Method of calculating temperature rise of brake  
drum. 23 pp.

Apr 1942 - Vol XVII, No 225

"Changes in Visual Perception at High Altitudes" 5305  
Studies on changes in visual fields, visual  
acuity and brightness-discrimination at high  
altitudes. 18 pp.

Apr 1942 - Vol XVII, No 226

"Research on the Low-Temperature Annealing of Cold- 4205.0239  
Worked Metals and Alloys, Report No 2"  
Experimental research on the chromium-vanadium  
steel wire. 27 pp.

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Apr 1942 - Vol XVII, No 227

"Vibration of an Elastic Wing Caused by Transient Forces" 2302.0800

Study of special wing vibrations caused by transient external forces, such as a gust of wind or landing by using the heaviside operational method. 34 pp.

Apr 1942 - Vol XVII, No 228

"Design of Symmetrical Airfoil Sections Suitable for High Speeds" 17 pp. 2302.0800

Apr 1942 - Vol XVII, No 229

"Effect of Acceleration on the Maze-Learning Ability of Albino Rats" 22 pp.

May 1942 - Vol XVII, No 230

"The Study on Recrystallization Temperature of Binary Alloys, Depart No 1, Two-phase Alloys" 4205.0902  
4205.0400

Experiments with pure Al, Mg and Cu, and with binary alloys of these primary metals, by annealing, cold-rolling, and heating and subsequent testing of recrystallization and dead-softening temperatures and softening range. 54 pp.

Jun 1942 - Vol XVIII, No 231

"On the Additional Terms in the Equilibrium Equations of Thin Elastic Plates which Undergo Finite Deformations" 14 pp. 8710

Jun 1942 - Vol XVIII, No 232

"Characteristics of the Cooling System, Part II" 2302.0200  
Relationship between the theory of radiators and experiments on radiators after installation. 10 pp.

Jul 1942 - Vol XVIII, No 233

"A Photographic Study of the Flow Patterns of a Centrifugal Supercharger (Model Experiment)" 55 pp. 2302.0200

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Jul 1942 - Vol XVIII, No 234

"Flexural-Torsional Vibrations of a Wing in Flutter Condition, Solved by Matrix-Operational Methods" 2302.0800  
31 pp.

Jul 1942 - Vol XVIII, No 235

"Exhaust Gas Turbo-Supercharger or Rocket Action of Exhaust Gas" 8 pp. 2302.0405  
2302.0200  
0407.0700

Jul 1942 - Vol XVIII, No 236

"Characteristics of an Aero-Engine Employing Dynamic Pressure due to Air Speed" 16 pp. 2302.0200

Jul 1942 - Vol XVIII, No 237

"Experimental Study on the formation of Shock Waves" 8710  
Airfoils tested in closed and open-type wind tunnels, and photographs of shock waves obtained. 20 pp.

Aug 1942 - Vol XVIII, No 238

"Spectroscopic Study of Engine Combustion, Report No 1" 4406.0400  
The emission spectra of engine combustion. 22 pp.

Sep 1942 - Vol XVIII, No 239

"Characteristics of the Cooling System, Part III" 2302.0200  
Relationship between the characteristics of a radiator prior to and after installation. 25 pp.

Sep 1942 - Vol XVIII, No 240

"Research on Hydraulic Load Testing of Aircraft, Report No 1" 2302.0800  
Fundamental experiments on the loading jack. 25 pp.

Sep 1942 - Vol, XVIII, No 241

"Effect of Acceleration Upon Living Bodies with Special Reference to its Effects upon Small Animals" 5305  
2,000 mice exposed to acceleration of 3 to 63 G's. 25 pp.

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Oct 1942 - Vol XVIII, No 242

"Experimental Research on Combustion  
Temperature in Engine Cylinders" 21 pp. 4406.0400

Nov 1942 - Vol XVIII, No 243

"Factors Affecting the Lateral Stability of an  
Airplane" 2302.0800  
Showing how lateral stability is affected by  
changes in vertical tail volume, dihedral, radius  
of gyration, wing loading, altitude of flight, etc.  
39 pp.

Nov 1942 - Vol XVIII, No 244

"Air-tight Oxygen Chamber" 2302.0609  
Method of countering the effect of 2302.0611  
atmosphere at high altitudes on the human body 5305  
by use of air-tight oxygen chamber. 19 pp.

Dec 1942 - Vol XVIII, No 245

"Characteristics of the Engine Air-Cooling System 2302.0200  
Part I, Fundamentals" 23 pp.

Dec 1942 - Vol XVIII, No 246

"Characteristics of the Engine Air Cooling System 2302.0200  
when installed Part II"  
Overall performance of the aero-engine, using  
an engine air-cooling system of the parallel-  
counter-flow type. 20 pp.

Dec 1942 - Vol XVIII, No 247

"Characteristics of the Air-Cooling System when 2302.0200  
installed Part III"  
Comparison of the 3 cooling systems-- the  
cross-flow type, the parallel-counter-flow  
type, and cooling medium type. 7 pp.

Dec 1942 - Vol XVIII, No 248

"Characteristics of the Cooling System, Part IV" 2302.0200  
Data on drag-coefficients obtained from full  
scale models.

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Dec 1942 - Vol XVIII, No 249

"Performances of Cooling Systems of Honey-Comb Type" 2302.0200  
7 pp.

Jan 1943 - Vol XIX, No 250

"Design of Airfoils in which the Transition of the Boundary Layer Is Delayed" 2302.0800  
47 pp.

Jan 1943 - Vol XIX, No 251

"Laminar Boundary Layer in Compressible Fluids" 8710  
Theoretical calculation of moment for airfoils  
NACA 0010 and LB 24. 24 pp.

Apr 1943 - Vol XIX, No 252

"Performance Tests for a Centrifugal Supercharger, fitted with Diffuser Guide Vanes of the Airfoil Section Type" 2302.0200  
30 pp. 2302.0607

Apr 1943 - Vol XIX, No 253

"Masking Effect of Noise, Part I, The Masking Effect of Noise with a Continuous Spectrum" 8710  
33 pp.

Jun 1943 - Vol XIX, No 254

"Various Production Methods for Strong Wrought-Aluminum Alloys." 4205.0301  
27 pp.

Jun 1943 - Vol XIX, No 255

Theoretical Considerations on Adiabatic Temperature Efficiencies, Overall Adiabatic Efficiencies and the Coefficients of Slip for a Centrifugal Super-charger 14 pp. 2302.0200

Jul 1943 - Vol XIX, No 256

"Season Cracking of Al-Zn-Cu-Alloys" 4205.0301  
Experiments with aluminum alloy containing 9% zinc, 2% magnesium and 3% copper. In - 4205.0500  
vestigation of relation between season cracking and corrosion with special study of properties of the crystal boundaries of the alloy. 40 pp.

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Jul 1943 - Vol XIX, No 257

"Spectroscopic Study of Engine Combustion,  
Report No 2" 4406.0400  
Absorption spectra of gaseous mixtures in  
engine cylinder. 14 pp.

Jul 1943 - Vol XIX, No 258

"On the Performance of Engine-Air-Cooling Systems,  
Part V" 2302.0200  
Effect of the area ratio of the cooler cores.  
5 pp.

Jul 1943 - Vol XIX, No 259

"Plane Stress in Orthogonal Aeolotropic Plates" 8710  
28 pp.

Jul 1943 - Vol XIX, No 260

"Performances of Cooling Systems with a High  
Temperature Efficiency" 14 pp. 2302.0200

Jul 1943 - Vol XIX, No 261

"A Photographic Study of the Flow Patterns at a  
Centrifugal Supercharger Inlet (Model Experiment)" 2302.0200  
11 pp. 2302.0607

Jul 1943 - Vol XIX, No 262

"Theoretical Investigation of Blower-Cooling of  
Aero-Engines" 19 pp. 2302.0200

Jul 1943 - Vol XIX, No 263

"Stress Distribution on an Annular Thin Plate under  
Normal Pressure and Uniform Shearing Load Along  
Its Inner Boundary" 15 pp. 8710

Jul 1943 - Vol XIX, No 264

"Torsional Buckling of a Cylindrical Shell under  
Internal or External Pressure" 12 pp. 8710

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Aug 1943 - Vol XIX, No 265

"Structure of Shock Waves"

8710

Tests of shock waves before pitot tubes, Laval  
nozzles and on airfoils. 100 pp.

Aug 1943 - Vol XIX, No 266

"Free Vibration of the Propellor Blade" 4 pp.

2302.0608

Aug 1943 - Vol XIX, No 267

"Numerical Calculation of Power Variation with  
Altitude in a Gear-Driven Super-Charged Engine"  
71 pp.

2302.0200

Aug 1943 - Vol XX, No 268

"Theoretical Calculation of Fuel Consumption of  
Aeroengines at High Altitude, Report No 1" 18 pp.

2302.0200

Aug 1943 - Vol XX, No 269

"Theoretical Calculation of Fuel Consumption of  
Aeroengines at High Altitude, Report No 2"  
Relation between the theoretical equation of  
indicated mean effective pressure of a super-  
charged engine with air-fuel ratio and the changes  
in indicated thermal efficiency with altitude,  
boost pressure and temperature.

2302.0200

Sep 1943 - Vol XX, No 270

"Complete Analysis of Dynamic Stability Formulae  
with Some Practical Examples"

8710

Sep 1943 - Vol XX, No 271

"The Problem of Unsteady Vibration Near the Critical  
Point of Wing Flutter" 37 pp.

2302.0800

Sep 1943 - Vol XX, No 272

"Measurement of High-Speed Air Flow by Mach-Zehnder  
Interferometer" 24 pp.

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Sep 1943 - Vol XX, No 273	
"Theoretical Calculations of Fuel Consumption at Normal Altitudes" 15 pp.	2302.0100 2302.0200 4203.0501
Nov 1943 - Vol XX, No 274	
"Methods of Measuring the Viscosity and Plasticity of Lubricating Oil" 35 pp.	8710
Nov 1943 - Vol XX, No 275	
"Velocity Distribution Around an Airfoil at High Speeds, I" 25 pp.	2302.0800
Dec 1943 - Vol XX, No 276	
"Research on Oiliness Testers, Part I" Oiliness tester of pendulum type with test results. 30 pp.	4203.0500
Jan 1944 - Vol XX, No 277	
"Estimation of Aero Engine Performance, Part I, High Altitude Performance" 99 pp.	2302.0200 2302.0100
Jan 1944 - Vol XX, No 278	
"Model Experiments of Blower Cooling of Aero-Engines" 21 pp.	2302.0200
Jan 1944 - Vol XX, No 279	
"Characteristics of the Cooling System, Part V, Cooling System Installed in the wings" 23 pp.	2302.0200
Jan 1944 - Vol XX, No 280	
"A Few Experiments on Mg-Mn System: A Deduced Mg-Mn Equilibrium Diagram" 21 pp.	4205.0300 4205.0400
Jan 1944 - Vol XX, No 281	
"The Dissolving Velocity Constant of Iron into Copper and Copper-Lead Alloys" 18 pp.	4205.0500 4205.0225

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Jan 1944 - Vol XX, No 282

"The Influence of Elastic Strain on the Age-Hardening of Duralumins" 11 pp. 4205.0301

Feb 1944 - Vol XX, No 283

"Measurement of Pressure Distribution of an Airfoil in Sub-Sonic Flow by Mach-Zehnder Interferometer" 11 pp. 2302.0800

Mar 1944 - Vol XX, No 284

"Performance of Air Cooling Systems, Part IV" 2302.0200  
Tests on the performance of the parallel-flow type, and the experimental cross-flow type air cooling systems. 11 pp.

Mar 1944 - Vol XX, No 285

"Leakages from a Pressurized Cabin" 14 pp. 2302.0609

Mar 1944 - Vol XXI, No 286

"A Photographic Study of the Flow Patterns in a Centrifugal Supercharger (Model Experiment) 'Schliren' Method" 29 pp. 2302.0200

Mar 1944 - Vol XXI, No 287

"Research on the Performance of a Centrifugal Supercharger Fitted with Diffuser Guide Vanes of the Airfoil Section Type with Special Reference to the Effect of the Number of Guide Vanes on Performance" 2302.0200

Mar 1944 - Vol XXI, No 288

"Influence of Various Elements upon Tempered Hardness of Super Duralumins" 19 pp. 4205.0301

Apr 1944 - Vol XXI, No 289

"Calculation and Improvement of Turns" 75 pp. 2302.0100

Apr 1944 - Vol XXI, No 290

"Velocity Distribution Around an Airfoil at High Speeds" 55 pp. 2302.0800



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May 1944 - Vol XXI, No 291

"The Effect of Low-Temperature Annealing on the Prevention of Grain-Growth"  
Research on the Uniforming of Crystal Grains.  
28 pp. 4205.0000

May 1944 - Vol XXI, No 292

"Effect of Vibration on the Human Body" 43 pp. 5305

May 1944 - Vol XXI, No 293

"Performance of Cooling Systems, Report No 7:  
Performance of the Honeycomb-Type Cooling System"  
5 pp. 2307.0200

May 1944 - Vol XXI, No 294

"Theory of Two-Dimensional Airfoils in Compressible Fluids" 48 pp. 2307.0800

May 1944 - Vol XXI, No 295

"Performance of Cooling Systems, Report No 8:  
Performance of Cooling System with Indirect Cooling Fin" 6 pp. 2302.0200

May 1944 - Vol XXI, No 296

"Elasticity of an Aneroid Gauge Membrane" 13 pp. 8710

Jun 1944 - Vol XXI No 297

"Analysis of the Quaternary Phase Diagrams" 47 pp. 8710

Jun 1944 - Vol XXI, No 298

"Estimation of Heat Transfer in a Liquid-Cooled Engine Cylinder" 7 pp. 2302.0200

Jun 1944 - Vol XXI, No 299

"Characteristics of the Cooling System, Part VI"  
Research on water, oil, and air-cooling systems. 24 pp. 2302.0200

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Jul 1944 - Vol XXII, No 300

"Valve Vibration in Aero-Engines" 9 pp. 2302.0200

Aug 1944 - Vol XXII, No 301

"Performance of Air Cooling Systems, Part VI" 2302.0200  
Performance when the resistance of the air ducts is taken into consideration.

Aug 1944 - Vol XXII, No 302

"The Boundary Layer of a Flat Plate in a Compressible Fluid" 27 pp. 8710

Aug 1944 - Vol XXII, No 303

"Study of Rust-Proof Magnesium Alloy CZM, Part I" 4205.0300  
"Basic research on rust-proof alloys, Part II, the Rust-Proof Qualities of Cd-Zn-Mn Magnesium Alloy"

Aug 1944 - Vol XXII, No 304

"Studies on Lubricant Additives, Part I, the Effect of High-Molecular Weight Ketones" 4 pp. 4203.0506

Aug 1944 - Vol XXII, No 305

"Calculation of Lift Distribution of a Monoplane Wing" 32 pp. 2302.0800

Aug 1944 - Vol XXII, No 306

"Research on Rust-Proof Magnesium Alloy CZM, Part 3, Characteristics of CZM Castings" 18 pp. 4205.0300

Aug 1944 - Vol XXII, No 307

"Effect of Width of the Impeller Outlet Upon the Centrifugal Supercharger Performance" 22 pp. 2302.0200

Sep 1944 - Vol XXII, No 308

"The Masking Effect of Noise, Part II, The Masking Effect of Warbling Tone (Radio)" 13 pp. 5305  
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Sep 1944 - Vol XXII, No 309

"Research on Lubricant Additives, Part II, The Detergent Effect of Soap-Type Addition Agents" 6 pp. 4203.0506

Sep 1944 - Vol XXII, No 310

"The Effect on the Human Body of Abrupt Changes of Atmospheric Pressure" 18 pp. 5305

Sep 1944 - Vol XXII, No 311

"Changing of the air in a Pressurized Cabin and the Volume of Air Required from the Pressurizer" 10 pp. 2302.0609 5305

Oct 1944 - Vol XXII, No 312

"Research on Rust-Proof Magnesium Alloy C2M, Report No 3, Part IV, Method of Manufacturing Magnesium Alloy Plates Suitable for Cold-Working" 46 pp. 4205.0300

Oct 1944 - Vol XXII, No 313

"Study of Spiral Instability from the Basic Design and the Flight-Test of an Airplane" 55 pp. 2302.0300

Nov 1944 - Vol XXII, No 314 *314 314 314 314*

"On Friction Dampers, Part I, with Intermittent Shipping" 6 pp. 8710

Nov 1944 - Vol XXII, No 315 *315*

"Friction Dampers, Part II, with Continuous Shipping" 5 pp. 8710

Nov 1944 - Vol XXII, No 316 *316*

"Friction Dampers, Part III, Optimum Adjustment" 6 pp. 8710

Nov 1944 - Vol XXII, No 317-318

"Research on the Human Body, when Subjected for a Prolonged Period to Low Atmospheric Pressure, Part I and II" 35 pp. 30 pp. 5305

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Dec 1944 - Vol XXII, No 319

"Calculation of the Temperature of High-Speed Air  
Currents" 7 pp. 8710

Dec 1944 - Vol XXII, No 320

"Fluid Resistance of a Thin Equilateral Right-angled  
Plate Attended by a Pair of Vortices in the Down  
Stream" 26 pp. 8710

Dec 1944 - Vol XXII, No 321

"The Laminar Boundary Layer in Compressible Fluids  
with Pressure Gradient" 10 pp. 8710

Dec 1944 - Vol XXII, No 322

"Further Research on the Laminar Boundary Layer  
in Compressible Fluids" 28 pp. 8710

Jan 1945 - Vol XXIII, No 323

"Application of the Hodograph Method to the Flow of a  
Compressible Fluid Past a Profile, with Special  
Reference to Its Lift and Moment" 24 pp. 8710

Feb 1945 - Vol XXIII, No 324

"Changes in Visual Perception at High Altitudes" 24 pp. 5305

Feb 1945 - Vol XXIII, No 325

"On the Velocity Distribution Around an Elliptic  
Cylinder at High Speeds" 9 pp. 8710

[End of "Reports of Aeronautical Research Institute" Abstracts]

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KIKAI GIJUTSU

"Mechanical Engineering Techniques"

4406.0000

Published monthly by Gijutsu Zasshi Sha (Technical Publishing Company). Articles on mechanical engineering subjects written by prominent Japanese engineers and physicists.

The following abstracts are from issues of Jan 1943 to Feb 1945 inclusive.

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Jan 1943

"The Theory of Hot Air Engines, Part 1"

4406.0400

The theory of the Ericson, Stirling, and Lehmann hot air engines. 9 pp.

"The Study of Eddies and Counter Flow in a Fluid Passing Through the Impeller Pump, Part 3"

4406.0100

Energy loss and efficiency drop due to eddies. 2½ pp.

"The Survey of Stress by the Use of X-rays"

4205.0237

The theory of measuring stress in the crystals of various metals. 5 pp.

"The Theory and Application of Machine Tools, Part 21"

4406.0300

An explanation of different types of milling machines. 6½ pp.

"The Theory of Self-Centering Chucks for Lathes" 2 pp.

4406.0300

"Lubricating Agents for Cutting and Drilling Tools, Part 1"

4406.0300

Lubricants and cutting compounds for machine working. 6½ pp.

Feb 1943

"Various problems Concerning Fuel Conservation"

4203.0100

Japan oil situation, theory of combustion, efficiency of oil-burning plants, and other conservation factors. 11 pp.

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Jul 1943

- "Powder-Coal-Burning Internal Combustion Engines,  
Part I" 4406.0400  
Introduction, construction of this type of engine,  
and tests conducted. 6 pp.
- "The Galitzin Gravity Meter" 4420.0300  
The theory, construction, and use of the Galitzin  
gravity meter. 7 pp.
- "Calculations of the Cutting Time on a Small Lathe,  
Part 7" 5205.0200  
Time and motion study on the lathe. 5½ pp.
- "The Theory and Application of Machine Tools, Part 27" 4406.0300  
Gear-cutting tools, theory and applications. 5 pp.
- "The Theory of Biaxial Thermodynamics, Part 3" 8710  
Theory and calculations continued from June  
issue. 5 pp.
- "Basic Knowledge for Air Defense in Factories, Part 4" 4413.1000  
The effect of explosives on concrete structures.

Aug 1943

- "Calculations of the Cutting Time on a Small Lathe,  
Part 8" 5205.0200  
Time and motion study of the lathe. 5 pp.
- "The Study of Nomograms, Part 3" 8710  
The mathematical and graphical analysis of  
alignment charts. 4 pp.
- "Labor-Saving Machinery, Part 30" 4406.0100  
Theory involved in transporting materials on  
cables. 3 pp.
- "The Theory of Metallurgy, Part 1" 4205.0235  
Introduction to metallurgy, and the theory of  
metallic elements. 5 pp.
- "Problems Concerned with Lubricating Oils" 4203.0506  
Theory of lubrication, its different applications,  
and the various problems connected with some  
lubricating oils. 5 pp.
- "Basic Knowledge for Air Defense in Factories, Part 5" 4413.1000  
Effect of explosives upon steel materials. 3 pp.

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The fuel-feed system, the compressed air-injection system, and the construction of the combustion chamber. 5 pp.
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Lathe setup and working time. 6 pp.
- "The Study of Nomograms, Part 4" 8710  
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- "The Theory of Metallurgy, Part 2" 4205.0235  
The electronic structure of elements. 6 pp.
- "Reinvestigation in the Defects of the Showa Sword" 6401.0700  
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Study of the effect of concussion upon buildings. 4 pp.

Oct 1943

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Study of time and motion in factories. 4 pp.
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Mathematical and graphical analysis of a three-variable alignment chart. 5 pp.
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General information on the resistance-type furnace. 7 pp.
- "Two-Dimensional Calculation for Rectangular Beams" 8710  
Shear and bending calculations of rectangular beams. 3 pp.
- "Basic Knowledge for Air Defense in Factories, Part 7" 4413.1000  
Construction of bomb-proof buildings -- reinforced concrete. 5 pp.
- "Designs for Eliminating Backlash in Machine Tools" 4406.0300  
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Chemical characteristics, methods of production and its uses. 5 pp.
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A research of time and motion study in factories. 4 1/2 pp.
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Industrial pulverization of raw materials, such as ores, chemicals, cement materials, etc. 3 pp.
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The electron theory of alloys. 4 pp.
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The theory of fluid flow through orifices. 5 pp.

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 A simple introduction to torsional vibrations.  
 6 pp.

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 The direction and velocity of a fluid flow are calculated by taking the pressure and electrical current readings of specially designed instruments.  
 4 pp.

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"Special Characteristics of Fluid Couplings, Part 2" 4406.0100  
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 Theory of fluid flow through various shapes of orifices and nozzles. 8 pp.

Translation: "Practical Solution of Torsional Problems, Part 3" 8710  
 Torsional vibrations in crankshafts. 5 pp.

Sep 1944

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 Various methods of surface-hardening metals, especially steel. Discussions on nitriding, case hardening, etc. 4 pp.

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 Discussion of the numerous ways of heat treating aluminum and magnesium alloys. 6 pp.

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 The Brinell hardness factor for chrome-plated metals, the industrial process for chrome-plating etc. 6 pp.

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 Theory of nitriding steel, the properties necessary in steel for nitriding, and industrial nitriding methods. 5 pp.

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Calculations in free oscillation. 4 pp.	
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"The Failure of Steel Under the Combined Torsion and Bending Stresses"	4205.1000
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"The Analytical Solution of Various Engineering Problems, Part 5, The Flow of Fluids Through Pipes" 4421  
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Translation: "Practical Solution of Torsional Vibration Problems, Part 6, Torsional Vibrations in Cranks" 2 pp. 8710

Dec 1944

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5 pp.

"The Study of Boiler Feed Water" 4406.0100  
Prevention of corrosion in entire system, and the forming of scales in feed pipes. 6 pp.

"The Analytical Solution of Various Engineering Problems, Part 7, The Flow of Fluids Through Pipes" 4421  
6 pp.

Translation: "Practical Solution of Torsional Vibration Problems, Part 7, Calculation of the Moment of Inertia of Cranks" 5 pp. 8710

Jan 1945

"The Theory of Fluid Flow" 8710  
Fluid flow through different nozzles and orifices. 10 pp.

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Electron theory of alloys (contd) 6 pp.

Translation: "Practical Solution of Torsional Vibration Problems, Part 7, Calculation of Moment of Inertia of Marine Propellers" 2 pp. 8710

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